Crown Corporation
BUSINESS PLANS
FOR THE FISCAL YEAR 2009–2010

Halifax-Dartmouth Bridge Commission
Business Plan 2009–2010

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Message from the Minister and the Chair

It is with pleasure that we submit the business plan for the Halifax-Dartmouth Bridge Commission (operating as Halifax Harbour Bridges or HHB) for 2009–10.

The past year was one of significant milestones that demonstrates the important role HHB plays in the transportation network in Nova Scotia:

- After several decades of use, tokens were eliminated as a payment method to cross the harbour bridges in favour of electronic tolling using MACPASS to help reduce traffic congestion and accommodate future traffic growth.
- HHB continues to be financially strong. In December 2007 the debt was reduced from $123 million to $60 million, and rating agencies continue to give high marks to HHB.
- HHB is leading the discussion around the growing traffic congestion in the Halifax Regional Municipality. A Cross Harbour Traffic Needs Assessment brought light to the issue of growing congestion and indicates that, unless we change how we manage our transportation system, we may need additional cross-harbour capacity in the future.
- Ensuring that the harbour bridges and surrounding structures are well maintained and structurally sound continues to be a priority for HHB. Significant projects completed in 2008 include improvements to four of the approach spans on the Dartmouth side of the MacKay Bridge and completely refurbishing the Victoria Road interchange.

This business plan highlights the projects that will make 2009–2010 equally significant. On April 1, 2009, HHB shifted its year-end to coincide with the provincial government year-end. We will also extend the use of MACPASS to parking facilities, install large variable signs at key locations, and continue the project to implement a state-of-the-art security system. These projects will ensure that HHB continues to provide safe, efficient, and reliable passage to customers at an appropriate cost.

The Honourable Graham Steele
Minister of Finance

Tom Calkin, P.Eng., CMC
Chair, Halifax-Dartmouth Bridge Commission

Mission

To provide safe, efficient, and reliable passage at an appropriate cost.

Mandate

The Halifax-Dartmouth Bridge Commission (operating as Halifax Harbour Bridges or HHB) is the self-supporting entity that operates two toll bridges, the Angus L. Macdonald Bridge and the A. Murray MacKay Bridge. It was created in 1950 by a statute of the Province of Nova Scotia and now operates under a statute passed in 2005. In accordance with Section 27 of the Halifax-Dartmouth Bridge Commission Act:

27 (1) With the approval of the Governor in Council, the Commission may construct, maintain and operate a transportation project across Halifax Harbour and the North West Arm, or either of them.

(2) Where the Government of the Province or the Municipality requests the Commission to investigate the sufficiency of the means of access to Halifax provided by the Bridges or the present or future need of a transportation project referred to in subsection (1), the Commission may

(a) conduct such investigation and studies as it considers advisable respecting

(i) the need or advisability of a transportation project referred to in subsection (1),

(ii) the proper location of any such transportation project,

(iii) the manner or method of financing and operating any such transportation project,

(iv) the probable cost of acquiring lands for the purposes of an additional transportation project and the cost of constructing such transportation project,

(v) any other matter related to the construction, operation or financing of a transportation project referred to in subsection (1) that the Commission considers relevant;

(b) for the purpose of making investigation and studies, engage expert or technical assistance;

(c) defray the cost of its investigations and studies out of the ordinary revenue of the Commission;

(d) make reports and recommendations to the Government of the Province and the Municipality.

(3) Any costs incurred by the Commission under this Section are expenses of operating the Bridges or a transportation project in respect of which the Commission is collecting tolls, fees, rates and other charges.

Planning Context

What follows is an overview of the structure and the factors that are considered in the planning process.

Organizational Structure

The Board of Commissioners has nine members: five are appointed by the Province of Nova Scotia, including the chair and vice chair; and four members are Regional Councillors, appointed by Halifax Regional Municipality. Within the board structure, standing committees deal specifically with audit; maintenance; finance/administration/planning (FAP); and operations, communications, and MACPASS (OCM).

There are 35 permanent administrative and maintenance staff, and HHB employs approximately 40 painters and 11 gardening staff seasonally. There are also approximately 50 dedicated members of the Commissionaires of Nova Scotia (CNS) who effectively manage the operations of the bridges.

Strengths

- HHB has 54 years' experience in maintaining and operating suspension bridges.
- HHB demonstrates leadership in implementing and operating electronic toll collection; 2008 marked 10 years since the inception of electronic tolling with MACPASS.
- HHB is financially self-reliant and reports to the Minister of Finance for the Province of Nova Scotia. As a self-funding user-pay operation, HHB receives no funding from the provincial government.
- HHB is financially strong. In 2008 its ratings were reaffirmed: AA (low) with DBRS and AA- stable from Standard & Poor's Rating Agency. In December 2007 HHB reduced its debt from $123 million to $60 million.
- Through strategic capital investments and a comprehensive maintenance plan, the harbour bridges are two of the best-maintained pieces of infrastructure in the province.
- MACPASS reduces toll plaza congestion and idling times to benefit the environment. During the peak travel time approximately 80 per cent of the crossings are made with MACPASS.

Weaknesses

- The Macdonald Bridge has been operating for 54 years and the MacKay Bridge for 39 years. Age, maintenance costs, and the effort required to ensure that they remain structurally sound will increase.
- At some point in the future, a toll rate increase will be required. The last toll increase was in 1992.

- Based on current traffic growth projections, the bridges are approaching full capacity. According to a 2005 traffic study, there are very few improvements that can be done to help ease congestion on the two bridges.

Opportunities

- HHB has identified growth opportunities within its core business areas to increase customer service by marketing MACPASS to other toll collection agencies. In late 2008 HHB secured approval to expand the use of MACPASS to parking facilities, including the Halifax Stanfield International Airport.
- HHB will continue to take a leadership role in finding solutions to manage the demand for transportation. There are ways in which tolling can play a role, and HHB will continue to analyse the potential impact.

Threats

- We are vulnerable to adverse economic developments that arise as a result of rising fuel costs and a downturn in the economy. Both can have a negative impact on traffic volumes on the bridges and affect revenue.
- Ensuring the safety of the public and public buildings/structures is of the utmost priority for HHB. In 2008 HHB initiated a three-year state-of-the-art security project.

Strategic Goals

To carry out its mission, Halifax Harbour Bridges has defined the following strategic goals:

- Manage the cash flow and debt to meet the future capital and maintenance requirements of HHB.
- When requested, advocate HHB's plan to address additional cross-harbour capacity and initiate planning steps to secure the transportation corridor.
- Focus on strengthening HHB's relationship with major stakeholders, including all who use the bridges.
- When requested, support and advance any potential projects with the Halifax Regional Municipality and the Province of Nova Scotia.
- Communicate HHB's long-term strategic plan.
- Become an industry leader in safety, security, and operations.
- Continue a major six-year maintenance program started in 2006.
- Become a recognized leader in the pursuit of sustainable transportation demand management solutions.
- Increase the percentage of vehicle crossings using MACPASS to 80 per cent.

Core Business Areas

Safety and Emergency Preparedness

Objective: To ensure the safety and security of the travelling public and employees through ongoing reviews and implementation of HHB's policies, operations, and initiatives.

The two harbour bridges are among the safest and best-maintained pieces of infrastructure in Nova Scotia. Safety measures include a wind detection system, mobile speed radar, ice detection sensors, around the clock bridge security, cameras and emergency telephones on the Macdonald Bridge.

Focus for 2009–2010

- Six variable message signs (VMS) will be installed on the approach roads to the MacKay Bridge (three in Halifax and three in Dartmouth), the first of their kind in Nova Scotia. These signs will be located prior to key decision points on the approach roads to the MacKay Bridge. They will display real-time information about construction projects, extreme weather conditions, or vehicle accidents to motorists, allowing drivers sufficient time to choose alternate routes.
- A three-year project to install a state-of-the-art security system including more cameras, lights, sensors, fences, and controlled access will continue. This project began in 2008.
- Incident management will be a significant focus in 2009 to analyse why, when, and how accidents occur.

Maintenance

Objective: To ensure that the bridges are well maintained and structurally sound.

The two harbour bridges are inspected to the highest standards. Each year they receive a rigorous inspection to ensure that all maintenance requirements are identified and proper action is taken. The annual inspection determines the course of action for the current year and forms the basis of the three-year maintenance plan.

With the extensive amount of construction work that takes place each year, HHB works hard to minimize disruption to the travelling public. As much as possible, work is done evenings and weekends.

The major projects completed in 2008 included refurbishing four of the overpasses on the Dartmouth approaches to the MacKay Bridge and completely renovating the Victoria Road interchange. HHB also finished the second year of a three-year painting program, focusing on painting the MacKay Bridge main cables and suspender ropes.

Focus for 2009–2010

The focus in 2009–10 will be to resurface the approach spans on the Macdonald Bridge. On the MacKay Bridge, the focus will be replacement of the stiffening truss

bearings and the expansion joints at the cable bents, further curb replacements on the Dartmouth approach spans, and some structural upgrades.

The extensive maintenance at the MacKay Bridge is part of the longer-term plan to ensure that major maintenance projects are complete in preparation for replacement of the suspended spans on the Macdonald Bridge sometime between 2014 and 2016.

Efficient Transportation

Objective: To maintain convenient and reliable passage by working with stakeholders to identify improvements, which will assist future capacity requirements.

Objective: To continue to market electronic toll collection (MACPASS) to decrease traffic congestion and accommodate future traffic growth.

In 2008 HHB marked the 10th anniversary of electronic tolling (MACPASS). The MACPASS electronic toll collection system provides benefits through faster transit times, added convenience, and cost savings over cash.

In 2008 HHB adopted an automated vehicle classification system based on vehicle axle counts. Axle-based tolling applies the toll based on the number of axles per vehicle and is a more fair and equitable way to determine the toll. This technology will allow HHB to evaluate additional tolling efficiencies, including open-road tolling or express lanes. It was also the year in which we upgraded the MACPASS system, eliminated the $30 deposit required to get a MACPASS transponder, and eliminated tokens.

The new MACPASS system provides improved online account management for the customer and significant improvements to internal account management, both of which will increase customer service levels.

Since March 2008, over 40,000 MACPASS transponders have been distributed. In 2007, 12,000 transponders were distributed through the year. During the peak travel time, approximately 80 per cent of the crossings are made with MACPASS.

Focus for 2009–2010

For the next fiscal year, efforts will be made to gain further efficiencies from the new system. Planning and analysis will begin to determine the feasibility of express lanes at the MacKay Bridge. This opportunity will allow vehicles to pass the collection points at highway speeds.

In 2009 MACPASS use will be expanded to the new parkade at the Halifax Stanfield International Airport. It will be a convenient way for MACPASS customers to use their transponder to park at the airport, reducing the amount of time it takes to exit the parkade.

These changes provide HHB with new opportunities to increase the use of MACPASS system and to plan for future tolling efficiencies.

Fiscal Management

Objective: To ensure HHB's financial stability through sound fiscal planning and efficient management.

By carefully managing its cash flow, generated by toll revenues, HHB is able to ensure that the bridges are well maintained and structurally sound for current customers and future generations. It is this strong fiscal management that has allowed HHB to balance the need to conduct significant construction and capital projects without increasing the cost of tolls since 1992. The timing of a toll increase will be considered in conjunction with impending maintenance requirements and tolling methods that might help reduce traffic congestion and greenhouse gases (e.g. peak period tolling, one-way tolling, and express lanes).

HHB is self-funded through tolls, and it receives no funding from any level of government.

In December 2007, with the maturing of the Toll Revenue Bonds Series 1 and the line of credit with the Province of Nova Scotia, HHB significantly reduced its debt from $123 million to $60 million.

Through sound budgeting, HHB is able to meet all financial commitments, including its annual operating and maintenance budget, annual interest payments, and current capital funding.

Priorities for 2009–2010

The following priorities support HHB's core business areas for 2009–2010

Safety and Emergency Preparedness

- Complete the variable message sign (VMS) project.
- Conduct training for commissionaires, including customer service, computer, LIDAR, and ongoing suicide intervention training.
- Increase violation enforcement of overweight vehicles and traffic.
- Implement phase one of three-year security system.

Maintenance

- Resurface the approach spans of the Macdonald Bridge.
- Replace guardrails on approach roads.
- Stiffen truss bearings and replace expansion joints at cable bents.
- Commence design of Macdonald Bridge deck replacement.

Efficient Transportation

- Expand use of MACPASS to parking facilities.
- Provide ongoing support and enhancements of new toll system.

- Implement voice-over-Internet telephone system.
- Begin initial design and analysis for express lanes and open-road tolling.

Fiscal Management

- Effectively collect tolls electronically and mechanically (ongoing).
- Maintain the reliability of internal control systems (ongoing).
- Meet capital project requirements (ongoing seven strategic management control).
- Manage the operations and maintenance budgets (ongoing).
- Use HHB's cash flow for capital expenditures and for debt reduction.
- Maintain current ratings: DBRS AA (low) and S&P AA – stable.
- Study potential impact of one-way and peak period tolling and determine the timing of future toll increases.

Halifax Harbour Bridges in the Community

Over the past year we have invested in our outreach to the communities we serve. It began with sharing our messages around the Cross Harbour Traffic Needs Assessment and continues with our position on the importance of having a sustainable transportation network for future generations. We have also begun sharing our vision for the long term. This approach will help people understand our vision: to provide transportation infrastructure that is environmentally and economically sustainable. To aid these efforts the Halifax-Dartmouth Bridge Commission has launched a new visual identity that better reflects the organization.

Vital Community Link

Halifax Harbour Bridges is an important economic and transportation link in Atlantic Canada. The two harbour bridges provide safe and efficient travel for thousands of commuters each day and are the direct road link between the port of Halifax's two container terminals and North American markets.

Sustainable Transportation

HHB is looking to the future to ensure that the need for future cross-harbour capacity is met to ensure the economic and environmental success of the communities. In the past, HHB has addressed the problem of congestion by introducing MACPASS and building a third vehicle lane, a pedestrian lane, and a bike lane on the Macdonald Bridge. Today, HHB is investigating the impact that peak period tolling, one-way tolling, and express lanes might have on further reducing congestion and greenhouse gases.

As part of its long-term strategic planning, HHB released the results of the Cross-Harbour Traffic Needs Assessment in March 2008, which examined the future need for additional cross-harbour capacity in the Halifax Regional Municipality (HRM). The report, which Delphi MRC conducted for the commission at HRM's request, is not a blueprint to build a third harbour crossing. It does represent sound, long-term strategic planning and offers options for the government, business community, and bridge users to consider.

The report revealed that, given current growth predictions for HRM, the region will require a third harbour crossing between 2016 and 2026. It also revealed that the best location for this crossing would be at the end of Highway 111 (the Circumferential) in Dartmouth to the south end of Halifax. HHB has referred the needs assessment report to the Strategic Joint Regional Transportation Planning Committee, which includes representatives of the Province of Nova Scotia, HRM, and transportation users.

The Environment

HHB is doing its part to reduce greenhouse gas emissions and reduce its carbon footprint. HHB employees take reducing waste seriously and have a significant process in place to divert workplace waste.

In 2009 HHB will develop an environmental policy and goals. We seek continual improvement in our environmental performance by setting, reviewing, and updating environmental goals.

Using MACPASS allows traffic to flow more quickly through the toll plazas, reducing congestion and more effectively utilizing the capacity of the bridges. Independent analysis quantifies the contribution of the MACPASS tolling system as follows:

- 81,400 hour/year of peak hour travel time savings across the bridges
- an estimated yearly increase of 200,000–280,000 peak hour trips as a direct result of MACPASS
- the reduction of fuel consumption by 484 000 litres
- the reduction of carbon dioxide by 1 160 tonnes during peak hours throughout the year

Through its dedicated bikeway and walkway on the Macdonald Bridge, HHB encourages healthy, active lifestyles. The daily average number of pedestrians on the Macdonald Bridge is over 500, and the daily average number of cyclists is over 350 during the cycling season.

Community Involvement

HHB is involved in various events and supports various organizations in the communities it serves. The annual Bridge Walk, held during Natal Day weekend, draws thousands of pedestrians for an afternoon of family fun. HHB is also an

original sponsor of the Blue Nose International Marathon, with thousands of runners crossing the Macdonald Bridge. HHB is also a founding partner of the MACPASS Mile—a free one-mile run across the Macdonald Bridge—open to people of all ages and abilities.

HHB is also proud to support various organizations, including the Discovery Centre and the Canadian Mental Health Association of Nova Scotia. HHB also hosts an annual Transportation Safety Day for the public to learn more about how to drive safely and use active transportation like walking and biking.

HHB helps local non-profit organizations promote themselves by hanging banners on the Macdonald Bridge or having access to floral beds along the approaches to the MacKay Bridge. Some of the organizations recently supported include

- Canadian Mental Health Association
- Heart and Stroke Foundation
- St. John Ambulance
- Bosom Buddies
- Breakfast for Learning
- Democracy 250
- Treaty Day
- Nova Scotia Lung Association

Budget Context

HHB continues to achieve financial stability and meet all of its obligations.

On December 4, 2007, the 10-year $100-million Toll Revenue Bonds Series 1 matured, and on December 5, 2007, the 10-year $30 million line of credit with the Province of Nova Scotia matured. These 10-year debts were replaced with a $60-million 12-year loan with the Province of Nova Scotia maturing December 4, 2019, and a $60-million line of credit with the Province of Nova Scotia maturing on December 5, 2019.

In 2008 HHB maintained its rating with Dominion Bond Rating Service Limited at AA (low) and achieved a rating increase from Standard & Poor's Ratings Group from A + positive to AA – stable.

	Budget 15 months ending Mar 31, 2009 ($,000)	Actual 15 months ending Mar 31, 2009 ($,000)	Projected 12 months 2009–10 ($,000)
Revenue			
Toll revenue	29,147	28,891	23,539
Other rate charges	262	182	144
Investment and sundry income:			
Trust fund investments	266	126	330
Other	400	375	570
Investment income		311	
Contributed revenue	3,500	2,575	
Contributed capital contribution		65	60
Token reserves taken into income		1,042	
Total Revenue	**33,575**	**33,567**	**24,643**
Expenses			
Operating	7,230	6,906	5,890
Maintenance	8,038	8,282	4,001
Amortization	5,659	5,843	4,807
Debt servicing	3,785	3,773	2,890
Loss (profit) on disposal of property, plant, and equipment		394	400
Total Expenses	**24,712**	**25,198**	**17,988**
Net Operating Income	8,863	8,369	6,654

Outcomes and Performance Measures

Core Business Area 1 *Safety and Emergency Preparedness*

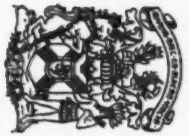
Outcome (Immediate and Intermediate)	Measure	Data	Target	Strategies to Achieve Target
The total number of motor vehicle accidents (MVAs) reduced	Annual MVA statistics	2008 annual statistics	1.2 accidents per 100 000 vehicle kilometres travelled (VKT)	Increased traffic enforcement by bridge police and Halifax Regional Police
Compliance with bridge weight restrictions	Reduced violations	Total summary offence tickets written in 2008	Development of database	Agreement with provincial Motor Vehicle Compliance Division in place for scheduled enforcement
Completion of variable message signs project	Increased safety and provision of real-time information to customers	Completion of installation Improved traffic management	Increased customer service	Completion of CNS staff training to maximize use of variable message signs flexibility
Compliance with posted speed limits	Annual average speed statistics	2008 average speeds	MacKay Bridge: 79 kph Macdonald Bridge: 65 kph	Development and implementation of LIDAR enforcement procedures and public information

Core Business Area 2 *Maintenance*

Outcome (Immediate and Intermediate)	Measure	Data	Target	Strategies to Achieve Target
Bridges maintained in a relatively superior condition	Engineer's annual inspection report Periodic thickness testing	Ongoing painting program (May–October) for both bridges; when the cycle is complete, painters start again	Continuous on a three-year cycle	Annual painting program
Installation of selected netting on Macdonald Bridge suspended spans over DND property	Final construction inspection report	2007 and 2008: Insufficient snow fall events to assess trial netting installation	2009: 100% complete	Access from sidewalk/bikeway; dependent on selection
Repair of MacKay approach spans concrete curb	Final construction inspection report	2007: 25% (Halifax approach spans north) 2008: 40% (Halifax approach spans south)	2009: 100% (Dartmouth approach spans south)	Night and weekend closures
Resurfacing of Victoria Rd interchange and refurbishment of Victoria Rd underpass	Final construction inspection report	2008: tender awarded, excluding bin wall on Ramp D; ramps resurfaced; Victoria Road to be resurfaced in 2009	2009: 100% complete	Where possible, nights and weekend lane closures; minimize weekday work and lane closures
Macdonald Bridge wearing surface	Final inspection report		100% resurface approach spans in wheel tracks to extend life	Night and weekend work, lane by lane; temperature and humidity sensitive

Core Business Area 2 *Maintenance*

Outcome (Immediate and Intermediate)	Measure	Data	Target	Strategies to Achieve Target
Macdonald Bridge: Barrington ramp resurfacing	Final inspection report		2009: 100%	Night and weekend work; ramp must be closed
MacKay Bridge approach spans: Repair stiffener	Final inspection report	1987: Stiffeners replaced where original steel brittle 2007: Two stiffeners with cracks at weld termination repaired; analysis shows fatigue critical	2009: 100%	No access from deck No lane closures Confined space
MacKay Bridge: Replacement of suspended spans bearings and expansion joints at cable bents	Final inspection report	1993: Expansion joints replaced Bearings are original	2009: 100%	Full closures of bridge required for replacement of bearings Expansion joints on weekends with lane restrictions
MacKay Bridge: Structural improvements from load analysis	Final inspection report	2007 health study and 2008 load analysis	2009: 100%	May require bridge closures



Core Business Area 3 *Efficient Transportation*

Outcome (Immediate and Intermediate)	Measure	Data	Target	Strategies to Achieve Target
Increase in the efficiency of traffic flow by increasing throughput and reducing congestion	Percentage of MACPASS usage	Percentage of MACPASS use 2008: 65.77%	March 31, 2010: 71%	Increased distribution Provide excellence in customer service

Core Business Area 4 *Fiscal Management*

Outcome (Immediate and Intermediate)	Measure	Data	Target	Strategies to Achieve Target
New long-term financing effective December 4, 2007	Continued accumulation of capital fund at $1.8 million/year	Years 2008–2019 principal repayment of $3 million/year with a balloon payment of $27 million in 2019	December 4, 2019	Maintain cash management to achieve requirements of long-term financing
Bond ratings maintained	Continuous positive cash flow and meet budget requirements	Toll revenue debt ratings AA (low) and AA- stable	Maintain baseline ratings	Meet all interest, principal, and fund requirements on time